UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,912	08/18/2003	Douglas LeCrone	EMC-97-153CON1	3185

24227 7590 06/05/2006	EXAMINER	
EMC CORPORATION	CHU, GABRIEL L	
OFFICE OF THE GENERAL COUNSEL	ART UNIT	PAPER NUMBER
176 SOUTH STREET	2114	
HOPKINTON, MA 01748		

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/642,912	LECRONE ET AL.
	Examiner	Art Unit
	Gabriel L. Chu	2114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *18 August 2003*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,2,8,9,11,12,14-16,18,19,25,26,28,29,31-33 and 35* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,2,8,9,11,12,14-16,18,19,25,26,28,29,31-33 and 35* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *18 August 2003* is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1.   The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.   A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2.   Claims 1, 2, 8, 9, 11, 12, 14-16, 18, 19, 25, 26, 28, 29, 31-33, 35 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 7, 9, 15 of U.S. Patent No. US 6631477. Although the conflicting claims are not identical, they are not patentably distinct from each other because Claim 1, 2, 8, 9, 11, 12, 14-16, 18, 19, 25, 26, 28, 29, 31-33, 35 of the instant application is anticipated by patent claim 1, 3, 7, 9, 15 in that claim 1, 3, 7, 9, 15 of the patent contains all of the limitations of claim 1, 2, 8, 9, 11, 12, 14-16, 18, 19, 25, 26, 28, 29, 31-33, 35 of the instant application. Claim 1, 2, 8, 9, 11, 12, 14-16, 18, 19, 25, 26, 28, 29, 31-33, 35 of the instant application therefore is not patently distinct from the earlier patent claims and as such is unpatentable for obvious-type double patenting (In re Goodman).

Further, claims 1, 2, 8, 9, 11, 12, 14-16, 18, 19, 25, 26, 28, 29, 31-33, 35 of the

instant application claim subset elements the earlier patent claims and as such is

unpatentable for obvious-type double patenting (Georgia-Pacific Corp. v. United States

Gympsum Co.).

Claim Objections

3.   Claim 1 objected to because of the following informalities: Referring to claim 1,

"5" is understood to a typo. Appropriate correction is required.

Drawings

4.   The drawings are objected to because, referring to figure 2a, "Relable" is

understood to refer to "Relabel". Corrected drawing sheets in compliance with 37 CFR

1.121(d) are required in reply to the Office action to avoid abandonment of the

application. Any amended replacement drawing sheet should include all of the figures

appearing on the immediate prior version of the sheet, even if only one figure is being

amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be

removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several

views of the drawings for consistency. Additional replacement sheets may be necessary

to show the renumbering of the remaining figures. Each drawing sheet submitted after

the filing date of an application must be labeled in the top margin as either

"Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are

not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held

in abeyance.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   **Claims 1 2 8 11 12 14 15 18 19 25 28 29 31 32 35 rejected under 35**

U.S.C. 102(e) as being anticiapted by US 6216211 to McBrearty et al. Referring to

claims 1, 18, McBrearty discloses a host computer having a mass storage subsystem

with business continuance features and at least two volumes (This is shown in figures 1

and 2.),

    comprising a time maker function command processor executing in said host

computer (From line 66 of column 3, "A user application interface is indicated at 18. All

appropriate and necessary hardware and software for a user to interact with the data

processing system is assumed to be included in the data processing system of FIG. 1.

Memory 20 is provided and interconnected with operating system 16, user interface 18,

disk storage subsystem 24 and LVM 30. LVM 30 includes a logical volume device

driver (LVDD) 34 the purpose of which will become clear as this description proceeds.")

for parsing and implementing business continuance commands in order to

transmit signals to and receive signals from said mass storage subsystem to activate

said business continuance features without disrupting business application processing

(From the abstract, "A system and method for managing mirrored logical volumes are

provided wherein a user designates one mirror of a given logical volume, having a first

entry point, as the backup mirror, with a different entry point, for that logical volume; and

thereafter, upon user issuance of an I/O command, appropriately valid mirror(s) are

selected to be read from or written to as a function of which of the two entry points to

the same data is specified." Further, from line 6 of column 1, "The present invention

relates to manipulation of mirrored data in a data processing system. More particularly,

it relates to the provision of two entry points into a logical volume, and a method for

choosing therebetween, to look at, back up or temporarily alter data without impairing

normal system operation.").

7.   Referring to claims 2 and 19, McBrearty discloses said business continuance

commands further comprise syntax to allow a user to identify standard volumes and

business continuance volumes on said mass storage subsystem (From line 27 of

column 4, "Logical volume 51 is triply mirrored. Mirrors 60, 62 and 64 are copies of

logical volume 51, physically residing on disks 52, 54 and 56. In accordance with the

present invention, a user may designate one of these three copies, 60, 62 and 64, to be

the backup or static copy which is unchanged during ordinary I/O operations.").

8.   Referring to claims 8 and 25, McBrearty discloses a query command for reporting on the status of business continuance volumes in said mass storage subsystem (From line 66 of column 6, "When mirror I is found to be available at test 162, we next check the availability of mirror II at 178. If mirror II is stale, the status of mirror III is checked at 180.").

9.   Referring to claims 11 and 28, McBrearty discloses said business continuance commands include volume conditioning statements to place business continuance volumes in condition for other uses (From line 27 of column 4, "Logical volume 51 is triply mirrored. Mirrors 60, 62 and 64 are copies of logical volume 51, physically residing on disks 52, 54 and 56. In accordance with the present invention, a user may designate one of these three copies, 60, 62 and 64, to be the backup or static copy which is unchanged during ordinary I/O operations.").

10.   Referring to claims 12 and 29, McBrearty discloses said volume conditioning statements include a relabel statement for changing the label on a volume (From line 54 of column 4, "At step 74 LVM 30 creates a new logical volume (LV) name and entry point, minor number. This new entry point points to the same data as the original entry point.").

11.   Referring to claims 14 and 31, McBrearty discloses said volume conditioning statements include a process statement for selecting volumes on which to operate (From line 27 of column 4, "Logical volume 51 is triply mirrored. Mirrors 60, 62 and 64 are copies of logical volume 51, physically residing on disks 52, 54 and 56. In accordance with the present invention, a user may designate one of these three copies,

60, 62 and 64, to be the backup or static copy which is unchanged during ordinary I/O operations.").

12.   Referring to claims 15 and 32, McBrearty discloses said volume conditioning statements include a rename statement for renaming data sets (From line 54 of column 4, "At step 74 LVM 30 creates a new logical volume (LV) name and entry point, minor number. This new entry point points to the same data as the original entry point. In order to subsequently access the data unique to the designated backup mirror, the new minor number is used.").

13.   Referring to claim 35, McBrearty discloses a host computer having a mass storage subsystem and a command processor; (This is shown in figures 1 and 2.),

and a business continuance command activation device (From line 66 of column 3, "A user application interface is indicated at 18. All appropriate and necessary hardware and software for a user to interact with the data processing system is assumed to be included in the data processing system of FIG. 1. Memory 20 is provided and interconnected with operating system 16, user interface 18, disk storage subsystem 24 and LVM 30. LVM 30 includes a logical volume device driver (LVDD) 34 the purpose of which will become clear as this description proceeds.")

for parsing business continuance commands and transmitting signals to the mass storage system and receiving signals from the mass storage subsystem to activate said business continuance features associated with the mass storage subsystem without disrupting business application processing on the host computer (From the abstract, "A system and method for managing mirrored logical volumes are

provided wherein a user designates one mirror of a given logical volume, having a first

entry point, as the backup mirror, with a different entry point, for that logical volume; and

thereafter, upon user issuance of an I/O command, appropriately valid mirror(s) are

selected to be read from or written to as a function of which of the two entry points to

the same data is specified." Further, from line 6 of column 1, "The present invention

relates to manipulation of mirrored data in a data processing system. More particularly,

it relates to the provision of two entry points into a logical volume, and a method for

choosing therebetween, to look at, back up or temporarily alter data without impairing

normal system operation.").

14.   **Claims 1 2 8 11 14 16 18 19 25 28 31 33 35 rejected under 35 U.S.C. 102(b)**

as being anticipated by US 5210865 to Davis et al. Referring to claims 1, 18, Davis

discloses a host computer having a mass storage subsystem with business continuance

features and at least two volumes (Figure 1.),

comprising a time maker function command processor executing in said host

computer for parsing and implementing business continuance commands in order to

transmit signals to and receive signals from said mass storage subsystem to activate

said business continuance features without disrupting business application processing

(Figures 2 and 4 show commands issued by host to controllers. From line 29 of column

2, "The invention allows data to be copied from one storage media to a second storage

media without interrupting I/O operations from one or more hosts to the shadow set.").

15.   Referring to claims 2 and 19, Davis discloses said business continuance

commands further comprise syntax to allow a user to identify standard volumes and

business continuance volumes on said mass storage subsystem (From line 42 of

column 3, "When a host wishes to write data to the shadow set, the host issues a

command whose format is illustrated in FIG. 2A. The command includes a "command

reference number" field that uniquely identifies the command, and a "unit number" field

that identifies the unit (e.g. the disk 20) to which data is to be written. The host issues a

separate write command for each disk that makes up the shadow set, using the proper

unit number. The opcode field identifies that the operation is a write. The "byte count"

field gives the total number of bytes contained in the data to be written and the "logical

block number" identifies the starting location on the disk. The "buffer descriptor"

identifies the location in host memory 12 that contains the data to be written.").

16.   Referring to claims 8 and 25, Davis discloses a query command for reporting on

the status of business continuance volumes in said mass storage subsystem (From line

61 of column 3, "Once a host transmits a read or write command, it is received by the

disk controller 18 that serves the disk identified in the "unit number" field. For a write

command, the disk controller will implement the write to its disk 20 and return an "end

message" to the originating host, the format of the write command end message being

illustrated in FIG. 3A. The end message includes a status field that informs the host

whether or not the command was completed successfully. If the write failed the status

field can include error information, depending on the nature of the failure. The "first bad

block" field indicates the address of a first block on the disk that is damaged (if any).").

17.   Referring to claims 11 and 28, Davis discloses said business continuance

commands include volume conditioning statements to place business continuance

volumes in condition for other uses (From line 35 of column 4, "When adding a new

member to the shadow set (i.e., a new disk 20), the system chooses a host processor to

carry out the processing necessary to provide the new member with all of the data

stored in the active members of the shadow set. The host will choose one active

member to function as a "source" and will sequentially copy all of the data from the

source that differs from data in the new member, to the new member or "target." Using

the method of the invention, data is transferred to the new member without interrupting

normal I/O operations between other hosts and the shadow set, while assuring that any

changes to data in the shadow set made during the copy operation will propagate to the

new member.").

18.   Referring to claims 14 and 31, Davis discloses said volume conditioning

statements include a process statement for selecting volumes on which to operate

(From line 42 of column 3, "When a host wishes to write data to the shadow set, the

host issues a command whose format is illustrated in FIG. 2A. The command includes

a "command reference number" field that uniquely identifies the command, and a "unit

number" field that identifies the unit (e.g. the disk 20) to which data is to be written. The

host issues a separate write command for each disk that makes up the shadow set,

using the proper unit number. The opcode field identifies that the operation is a write.

The "byte count" field gives the total number of bytes contained in the data to be written

and the "logical block number" identifies the starting location on the disk. The "buffer

descriptor" identifies the location in host memory 12 that contains the data to be

written.").

19.   Referring to claims 16 and 33, Davis discloses said volume conditioning

statements include a simulate statement for simulating the effect of other volume

conditioning statements without making actual changes (From line 40 of column 5, "As

described above, I/O operations to the shadow set will continue while a new member is

being added. However, hosts are required to perform write type operations in a manner

that guarantees that while a a new member is being added, all data written to logical

blocks on the target disk will be identical to those contained on the source disk. If hosts

issue I/O commands in parallel, as is normally done, it is possible that the data on the

source and target will not be consistent after the copy method described above is

implemented. To avoid possible data corruption, hosts shall ensure that write

operations addressed to the source disk are issued and completed before the

equivalent operation is issued to the target disk. As explained above, each host stores

a table that lists data that the host needs to operate properly in the system. For

example, each table will include information regarding the disks that make up the

shadow set, etc. The table also stores status information that informs the host whether

or not a new member is being added to the shadow set. Therefore, before a host

executes an I/O request to the shadow set it will check the status field in its table, and if

the host determines that a new member is being added, the host will implement the

special procedures discussed above for avoiding possible data corruption.").

20.   Referring to claim 35, Davis discloses a host computer having a mass storage

subsystem and a command processor (Figure 1.),

        and a business continuance command activation device for parsing business

continuance commands and transmitting signals to the mass storage system and

receiving signals from the mass storage subsystem to activate said business

continuance features associated with the mass storage subsystem without disrupting

business application processing on the host computer (Figures 2 and 4 show

commands issued by host to controllers. From line 29 of column 2, "The invention

allows data to be copied from one storage media to a second storage media without

interrupting I/O operations from one or more hosts to the shadow set.").

Claim Rejections - 35 USC § 103

21.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

22.   **Claim 9 and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over**

US 6216211 to McBrearty et al. as applied to claim1, 18 above, and further in view

of US 3704453 to Blackwell et al. Referring to claims 9 and 26, although McBrearty

does not specifically disclose said signals are inserted in a channel command word and

sent by a startio instruction to said mass storage subsystem, inserting a command into

a channel command word and starting an I/O operation with a command is known in the

art. An example of this is shown by Blackwell from line 10 of column 1, "Peripheral

control devices or channel apparatus are provided in a data processing system to

control data transfer between an input/output (I/O) device and the main storage unit of

the system. The central processor or CPU of the system may initiate such data transfer

by execution of a START I/O instruction in response to which a channel retrieves a

channel command word from storage that specifies the type of operation to be

performed, the location in storage to or from which the data is to be transferred, and a

count indicating the number of units of data to be transferred. Once the CPU has

initiated the operation, it is released to return to its own program without further

interruption until the transfer has been performed. Such a channel apparatus is

disclosed in the King et al. patent, U.S. Pat. No. 3,488,633, assigned to the assignee

of the present application. That patent is incorporated in the present patent application

by reference." A person of ordinary skill in the art at the time of the invention would have

been motivated to use a CCW, and subsequent START I/O, to implement commands

because, from Blackwell above, "to control data transfer between an input/output (I/O)

device and the main storage unit of the system" and McBrearty shows, for example in

figure 1, the interaction between a CPU and logical volume manager including a logical

volume device driver.

23.   **Claim 9 and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over**

US 5210865 to Davis et al. as applied to claim1, 18 above, and further in view of

US 3704453 to Blackwell et al. Referring to claims 9 and 26, although Davis does not

specifically disclose said signals are inserted in a channel command word and sent by a

startio instruction to said mass storage subsystem, inserting a command into a channel

command word and starting an I/O operation with a command is known in the art. An

example of this is shown by Blackwell from line 10 of column 1, "Peripheral control

devices or channel apparatus are provided in a data processing system to control data

transfer between an input/output (I/O) device and the main storage unit of the system.

The central processor or CPU of the system may initiate such data transfer by execution

of a START I/O instruction in response to which a channel retrieves a channel

command word from storage that specifies the type of operation to be performed, the

location in storage to or from which the data is to be transferred, and a count indicating

the number of units of data to be transferred. Once the CPU has initiated the operation,

it is released to return to its own program without further interruption until the transfer

has been performed. Such a channel apparatus is disclosed in the King et al. patent,

U.S. Pat. No. 3,488,633, assigned to the assignee of the present application. That

patent is incorporated in the present patent application by reference." A person of

ordinary skill in the art at the time of the invention would have been motivated to use a

CCW, and subsequent START I/O, to implement commands because, from Blackwell

above, "to control data transfer between an input/output (I/O) device and the main

storage unit of the system" and Davis shows, for example in figure 1, the interaction

between a host and storage controllers.

24.   **Claims 16 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over US 6216211 to McBrearty et al. in view of McBrearty's background. Referring

to claims 16 and 33, McBrearty's background discloses said volume conditioning

statements include a simulate statement for simulating the effect of other volume

conditioning statements without making actual changes (From line 13 of column 2,

"There are occasions, however, when users want an instant snapshot of data on a

mirrored logical volume. The user may want to simply backup the data; or it may be

desired to make changes to the data, run an application and evaluate the results. The

user may then choose to eliminate the changes and restore the original data. Prior art

techniques historically require a user who desires to revert to the original data, to first

make a backup copy of the data before restoring it. These actions are time consuming.

AIX allows a user to split a mirror into a new logical volume. The user has the option of

running against data on either logical volume. A drawback of this technique becomes

apparent when it is desired to rejoin the split off mirror copy to the source copy. The

entire logical volume must be resynchronized, regardless of the number or nature of

changes made on either logical volume, an operation which may take a relatively long

time."). McBrearty was motivated to improve upon the existing capability of AIX

because, from line 31 of column 2, "a need arises to more efficiently manage mirrored

logical volumes."

25.   **Claims 12 15 29 32 rejected under 35 U.S.C. 103(a) as being unpatentable**

over US 5210865 to Davis et al. as applied to claim 11 28 above, and further in

view of US 5655154 to Jain et al. Referring to claim 12 29, Davis discloses

conditioning a volume (From line 35 of column 4, "When adding a new member to the

shadow set (i.e., a new disk 20), the system chooses a host processor to carry out the

processing necessary to provide the new member with all of the data stored in the

active members of the shadow set. The host will choose one active member to function

as a "source" and will sequentially copy all of the data from the source that differs from

data in the new member, to the new member or "target." Using the method of the

invention, data is transferred to the new member without interrupting normal I/O

operations between other hosts and the shadow set, while assuring that any changes to

data in the shadow set made during the copy operation will propagate to the new

member."). Although Davis does not specifically disclose adding a new disk may

comprise a relabel statement for changing the label on a volume, relabeling a disk is a

well known disk management operation. An example of this is shown by Jain from line

30 of column 8, "LABEL [Creates, changes, or deletes the volume label on a disk]". A

person of ordinary skill in the art at the time of the invention would have been motivated

to relabel a disk because, as shown by Davis, a new disk is being added to the system.

26.   Referring to claim 15 32, Davis discloses conditioning a volume (From line 35 of

column 4, "When adding a new member to the shadow set (i.e., a new disk 20), the

system chooses a host processor to carry out the processing necessary to provide the

new member with all of the data stored in the active members of the shadow set. The

host will choose one active member to function as a "source" and will sequentially copy

all of the data from the source that differs from data in the new member, to the new

member or "target." Using the method of the invention, data is transferred to the new

member without interrupting normal I/O operations between other hosts and the shadow

set, while assuring that any changes to data in the shadow set made during the copy

operation will propagate to the new member."). Although Davis does not specifically

disclose adding a new disk may comprise a rename statement for renaming data sets,

relabeling (a name) a disk (a set of data) is a well known disk management operation.

An example of this is shown by Jain from line 30 of column 8, "LABEL [Creates,

changes, or deletes the volume label on a disk]". A person of ordinary skill in the art at

the time of the invention would have been motivated to relabel a disk because, as

shown by Davis, a new disk is being added to the system.

Response to Declaration

27.   The declaration filed on 16 January 2004 under 37 CFR 1.131 has been

considered but is ineffective to overcome the McBrearty reference. Applicant will note

that 37 CFR 1.131 requires a **showing** (emphasis Examiner's) of facts. The mere

statement of facts is insufficient.

Conclusion

28.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. See notice of references cited.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Gabriel L. Chu whose telephone number is (571) 272-

3656. The examiner can normally be reached on weekdays between 8:30 AM and 5:00

PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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